KNOWLEDGE MANAGEMENT AT ECOPETROL



A CONTINUES JOURNEY

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TRABAJAMOS PARA PRODUCIR BARRILES LIMPIOS

"...More than half of all professionals in reservoir oil; will reach retirement age in the next decade, which poses a real challenge for the industry.."

Yasuhiko Kamakura - 2012





AGENDA

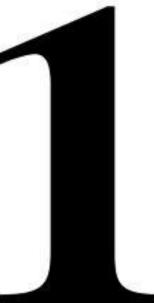


- 1. Our Dream and Reason to Exist
- 2. The beginning of our journey: Knowledge Management at Ecopetrol
- 3. Our strategy in Knowledge Management
- 4. Results and Referents









4

FUTURO COLOMBIA ENERGÍA COLOMBIA FUTURO ECODETROL



THE FUTURE THAT

INSPIRES US IS









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9000 Direct Employees 35000 Contractors 44000 COLLABORATORS



Vision of the Ecopetrol Corporate Group

Ecopetrol, corporate group, focused on petroleum, gas, petrochemicals and alternative fuels, to become one of the 30 largest oil companies in the world, recognized for its international positioning, its innovation and its commitment to sustainable development

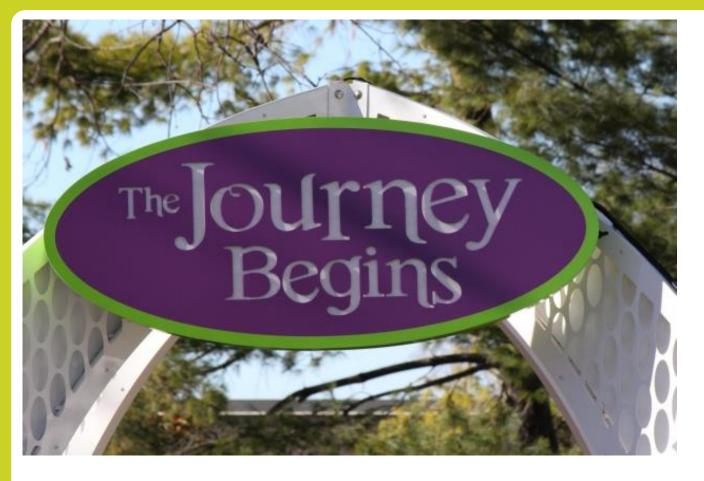
Mission of the Ecopetrol Corporate Group

We find and convert energy sources into value for our customers and shareholders, ensuring the integrity of people, the safety of processes and protection of the environment, contributing to the welfare of the areas where we work, by means of committed personnel who seek excellence, integral development and the development of long-term relationships with interested parties.



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2004

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APQC's ROAD MAP TO KM RESULTS: Stages of Implementation ™



Stage 1 **Getting Started**

Stage 2 **Develop Integrated Strategy**

Stage 4 Integrate, Expand and **Support**

Stage 3 **Launch Value Chain KM Pilots**

Stage 5 **Institutionalize KM Across Value Chain**

Adaptado de Carla O'Dell, APQC, 2000

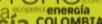






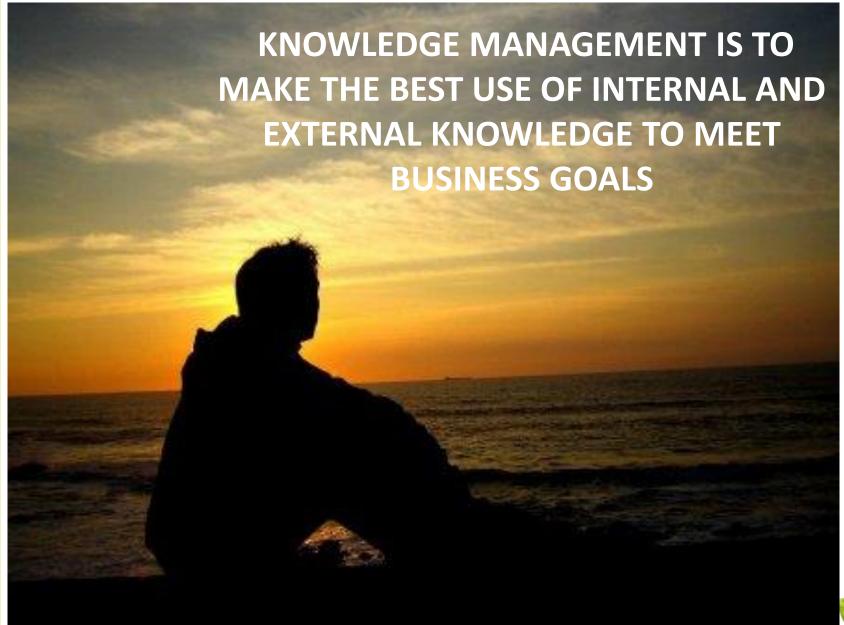








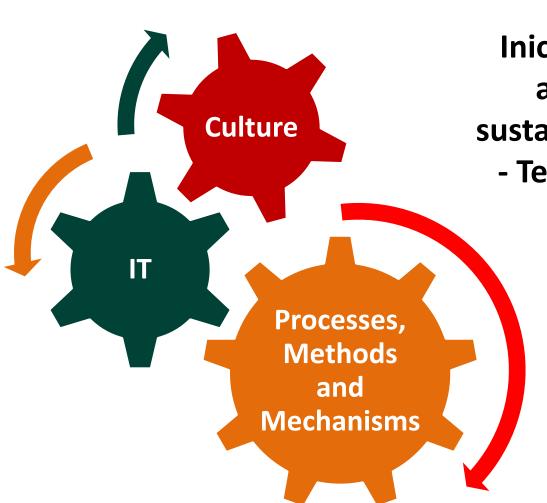




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Corporate Program for Implementation of Knowledge Management





Iniciatives for Incorporation,
assurance, transfer and
sustainability of key Knowledge
- Technology and Operations

Practices

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Roles and Responsabilities



We all are responsible by the assurance of information and knowledge.

Presidency

Monitors the implementation

VP of Innovation

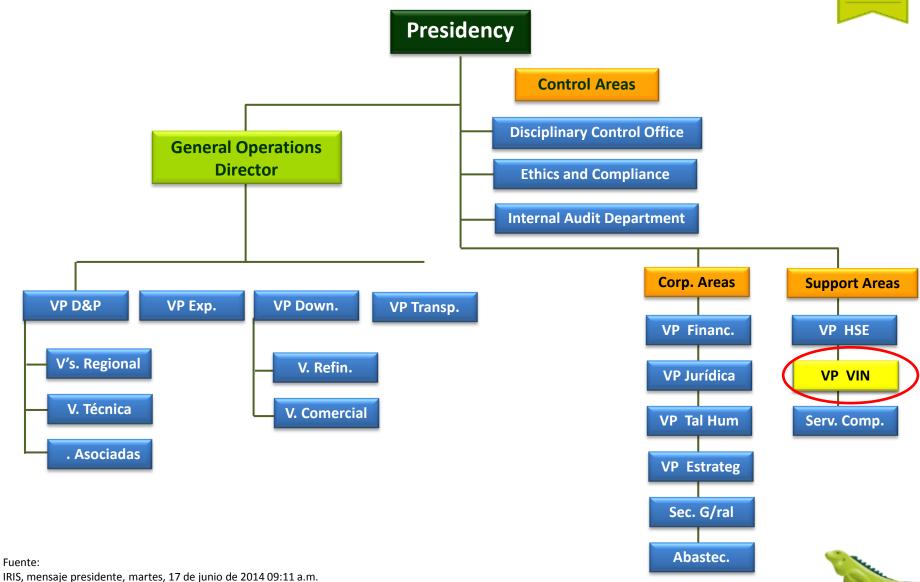
Leader of the process, ensures full and effective implementation

Operational Units

Implementers

Knowledge Management Governance





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Governance of Knowledge Management



Vice Presidency of Innovation and Technology

Innovation, Knowledge and Technology Strategic Direction (DCT)

Strategic Unit at Knowledge Management and Innovation

Information Technology
Department

Colombian Petroleum Institute



Cross unit team in Knowledge Management and Innovation



KM and Innovation as a part of the Consolidation Strategy of Ecopetrol



PROMISE OF VALUE

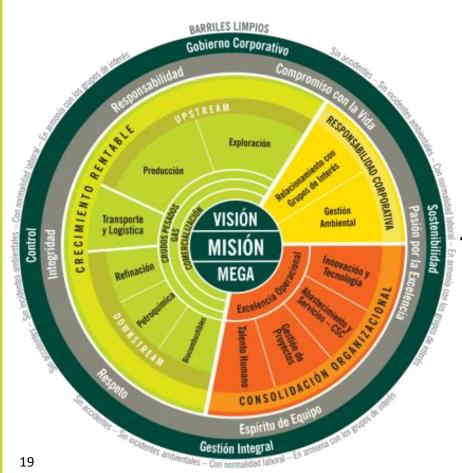
We consider Knowledge and Technology Management, and Innovation as key factors in creating value and competitive advantage for the organization. We strengthen organizational learning, incorporating new knowledge and best practices of the industry. "

ECOPETROL POLICY - 7th Principle, Dec 2010



KM and Innovation as a part of the Consolidation Strategy of Ecopetrol





The results of growth requires talent to support the strategy, technology and knowledge advantages and of capacity development in the most critical processes

KM and Innovation as a part of the Consolidation Strategy of Ecopetrol





Innovation and Technology

This axis aims to strengthen innovation and competitiveness, incorporating, ensuring and transferring knowledge, information and technology.











Retirement
Generational gap
Employee Turnover
Competitive Sector



New Expectations

New Expectations

Professional Expertise

Academic Formation

Flexible Schedules







KM Strategy



Strategy of Knowledge Management



- Knowledge required by Projects and Competitive Advantage
- Knowledge adsorption
- Training Programs
- Programs in schools, colleges and universities

KM in the Project **Implementation Plan Knowledge Maps in Strategic** Focus

Success Stories Process Indicators Results and economics indicators

- Benefits and results of KM in **Business Areas**
- Consolidation and dissemination of success stories

INCORPORATE NEW KNOWLEDGE AND SOCIALIZE

ASSURE INTERNAL TRANSFER

- Assurance critical charges
- Assurance Processes and key technologies
- Develop Succession Programs
- Develop Training Programs in EU
 - Learning Responsibilities

KM Process

Guideline for identification of critical knowledge

Trust, processes, training, recognition, communication

CULTURE

& TOOLS

STRENGTHEN THE **EXTERNAL KNOWLEDGE TRANSFER**

- **Guide Subsidiaries Networks of synergies Packaging Technology** and Services
- Working with stakeholders and subsidiaries to develop networks and share knowledge and know-how
- Development services based of knowledge

CAPITALIZE RESULTS AND DISSEMINATE

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Our Final Goal



- 1 Assurance Knowledge of Process
- 2 Assurance Knowledge of People
- Assurance Knowledge of Key
 Technology



IT, Collaborative Tools

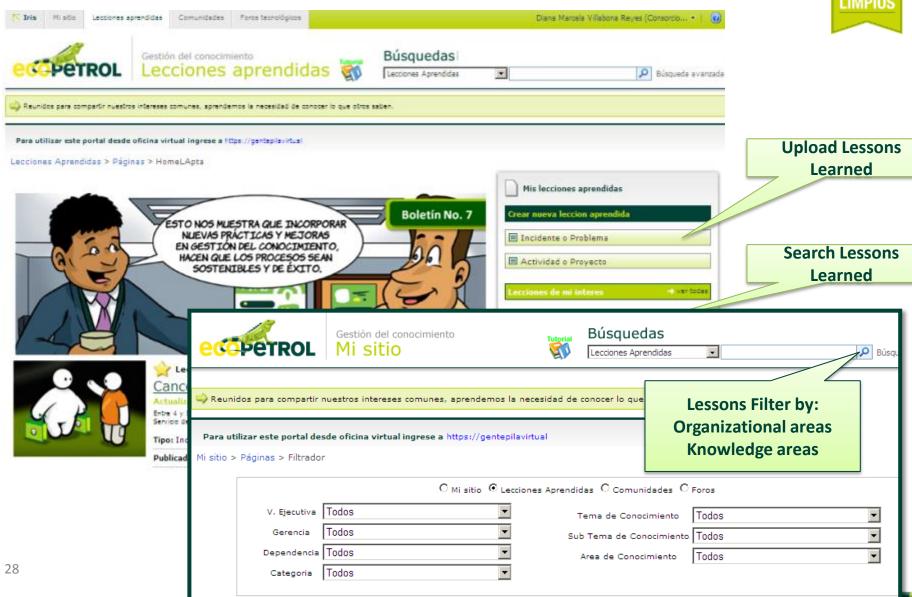




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KM Portals - Lessons Learned





Success Stories













PETROL

Mechanisms, methods



Technological Environment Forums





Cross Unit Team in Knowledge Management

Ecopetrol University



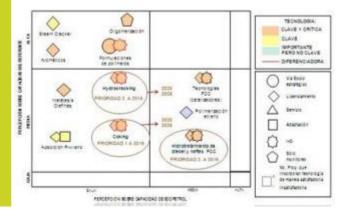


Communities of Practice

Mechanisms, methods



Strategic and Tactical Technology workshops





Succes Stories

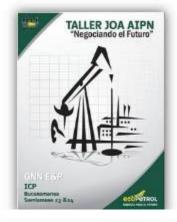
Lessons Learned

My site

Thinking methods

Cross unit teams

Work Events for Knowledge Transfer





Dialogue Spaces

Technological and Innovation Committee

Technological Environment Forums









Technological Environment Forums













Business Results

Individuals Performance Objectives

Success Stories

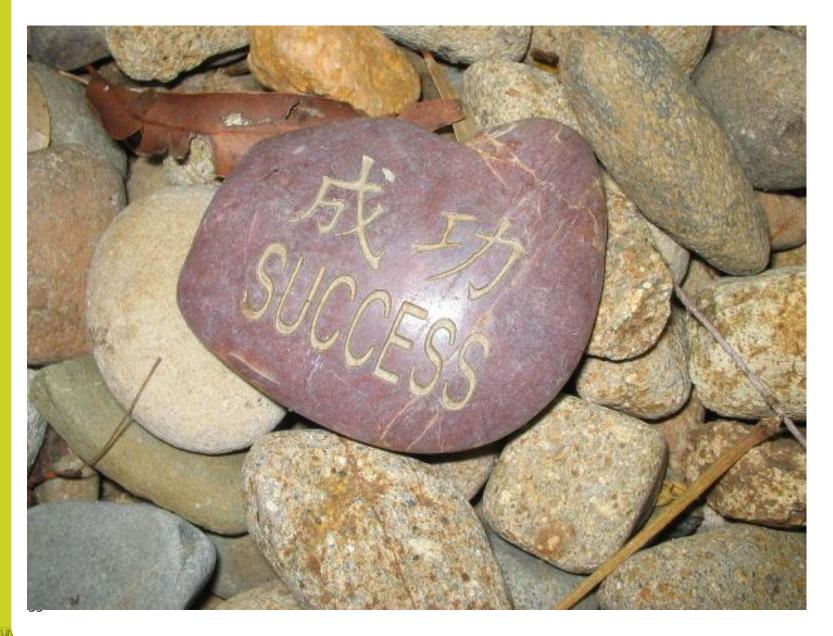
Effectiveness of tools and methods

Organizational Culture

Metrics and Statistics of IT







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Increasing productivity / Reducing costs

Reformulation of the Strategy

Improving processes

Organizational Learning

Intellectual Property

Corporate Recognition



ECOPETROL: Cases of KM Value





Through the technological Forum: in 2009: "Environmental Management in the Oil Industry" developed by ECOPETROL involving companies worldwide......

The use of a KM Mechanism led to the reformulation of Ecopetrol's Strategy



CORPORATE RESPONSIBILITY

- ✓ Environmental Management
- ✓ Relationships with stakeholders

ECOPETROL: Cases of KM Value



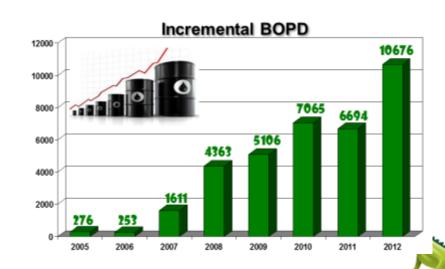


- Selling the issue
- Interactingwith stakeholders
- Linking more people to the theme
- Training new professionals
- Applying Lessons learned

Year	# works	Incremental Bopd
2005	4	276
2006	8	253
2007	29	1,214
2008	52	2,433
2009	62	1,869
2010	86	7,065
2011	71	6,694
2012	137	10,676
Total (449	30,480

A CoP that has assured technology and knowledge in well stimulation to increase the oil production

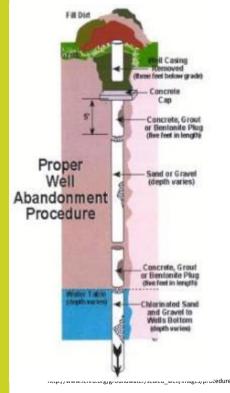




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ECOPETROL: Cases of KM Value







Abandonment
Study Group - save
\$ 2 million / year



Technical support – Regulatory (Ministry of Mines and Energy)



Collaboration across-areas, Expertise availability, making decisions



Assurance controls SOX / COSO



278 Environmental Recovery 2012 and 2013.

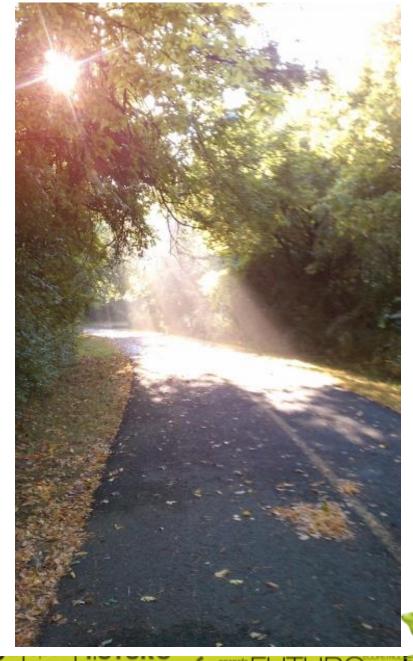
Well Abandonment CoP is achieving cost savings to Ecopetrol

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MUS\$ 5.19 in 2014 KM Initiatives



The journey continues

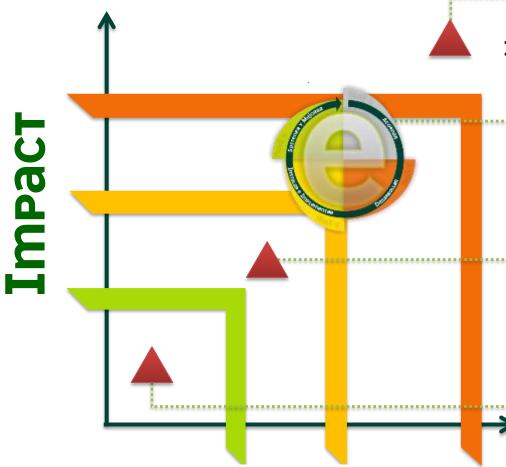


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Knowledge Management Scheme of Impact Evolution

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Innovation and competitiveness

- Added value to the process
- Benefits and Demonstrable impact
 - Generating new knowledge

Continuous Improvement

- Building and exchange of knowledge applied to the process
 - Appropriation of Best Practices

Synergies

Share What we know (information) to achieve area targets.

- Point Results on individual needs

Maturity

Tomado y adaptado de VIT - Coordinación de Conocimiento, Tecnología e Información - CSI

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http://flavioluisbuccino.blogspot.com/2013/09/comparaciones-cool.html

Our Referent







MAKE GLOBAL 2013



2010 - 2011(38) - **2012** (28) - **2013** (26)

- Samsung
- McKinsey & Company
- Toyota
- Schlumberger
- PwC
- Apple
- Google
- Accenture
- ConocoPhillips
- Deloitte
- Fluor
- Amazon.com
- Tata Group
- 14. IBM
- POSCO
- Wipro Limited
- 17. Infosys Limited
- Microsoft
- Ernst & Young
- Vale S.A.
- 21. Inditex
- APOC
- 23. Royal Philips Electronics
- 24. The World Bank
- FMC Technologies

- 26. Ecopetrol
- 27. SAP
- 28. Siemens
- Novartis
- eClerx Services
- Baoshan Iron & Steel
- General Electric
- MITRE
- 34. Del Monte Foods
- Woods Bagot
- WorleyParsons
- 37. SAS Institute
- 38. Arup
- Hewlett-Packard
- 40 Larsen & Toubro
- 41. Chevron
- 42. Phillips 66
- 43. BP
- 44. Mars
- 45. Rovio Entertainment
- 46. Royal Dutch Shell
- 47. Facebook
- 48. Cuatrecasas
- 49. Mindtree
- 50. Sonova Group
- 51. Petrobras
- 52. KPMG





















TRABAJAMOS PARA PRODUCIR BARRILES LIMPIOS

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